

INTERNATIONAL SEARCH REPORT

International application No
PCT/US2006/022443

A. CLASSIFICATION OF SUBJECT MATTER		
INV. C12N1/12	C12N1/20	C12M1/00 C12M1/04 C12P1/00
According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED		
Minimum documentation searched (classification system followed by classification symbols) C12N C12M		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic data base consulted during the international search (name of data base and, where practical, search terms used) EPO-Internal, WPI Data, EMBASE, BIOSIS		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 01/74990 A (STICHTING ENERGIE [NL]; REITH JOHANNES HENRICUS [NL]; HACK CORNELIS JO) 11 October 2001 (2001-10-11) the whole document	1-19
A	WO 2004/009826 A2 (UNIV SHERBROOKE [CA]; UNIV LAVAL [CA]; RIVAL S E C [CA]; TREMBLAY REJE) 29 January 2004 (2004-01-29) the whole document	
A	US 4 236 349 A (RAMUS JOSEPH S) 2 December 1980 (1980-12-02) the whole document	
A	US 4 087 936 A (SAVINS JOSEPH GEORGE ET AL) 9 May 1978 (1978-05-09) the whole document	
<input type="checkbox"/> Further documents are listed in the continuation of Box C. <input checked="" type="checkbox"/> See patent family annex.		
* Special categories of cited documents: *A* document defining the general state of the art which is not considered to be of particular relevance *E* earlier document but published on or after the international filing date *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) *O* document referring to an oral disclosure, use, exhibition or other means *P* document published prior to the international filing date but later than the priority date claimed *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art *&* document member of the same patent family		
Date of the actual completion of the international search 12 January 2007		Date of mailing of the international search report 25/01/2007
Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patenlaan 2 NL - 2280 HV Rijswijk Tel: (+31-70) 340-2040, Tx. 31 651.epo.nl Fax: (+31-70) 340-3016		Authorized officer Huse, Isabelle

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Information on patent family members

International application No

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Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 0174990	A	11-10-2001	AU 4694901 A EP 1272607 A1 NL 1014825 C2	15-10-2001 08-01-2003 04-10-2001
WO 2004009826	A2	29-01-2004	AU 2003249820 A1 CA 2395622 A1 CA 2493910 A1 CN 1681934 A EP 1523566 A2 JP 2006503556 T KR 20050053594 A US 2006099694 A1	09-02-2004 22-01-2004 29-01-2004 12-10-2005 20-04-2005 02-02-2006 08-06-2005 11-05-2006
US 4236349	A	02-12-1980	NONE	
US 4087936	A	09-05-1978	CA 1089790 A1	18-11-1980



PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference PCT-2006-1	FOR FURTHER ACTION See Form PCT/PEA/416	
International application No. PCT/US2006/022443	International filing date (day/month/year) 07.06.2006	Priority date (day/month/year) 07.06.2005
International Patent Classification (IPC) or national classification and IPC INV. C12N1/12		
Applicant HUNTLEY, Mark, Edward		
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <u>4</u> sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p style="margin-left: 20px;">a. <input type="checkbox"/> sent to the applicant and to the International Bureau a total of sheets, as follows:</p> <p style="margin-left: 40px;"><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p style="margin-left: 40px;"><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p style="margin-left: 20px;">b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in electronic form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>		
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the report</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII Certain observations on the international application</p>		
Date of submission of the demand 2007-01-03	Date of completion of this report 19.07.2007	
Name and mailing address of the International preliminary examining authority:  European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016		Authorized officer Sonnerat, Isabelle Telephone No. +31 70 340-0 

**INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY**

International application No.
PCT/US2006/022443

Box No. I Basis of the report

1. With regard to the **language**, this report is based on
- ☒ the international application in the language in which it was filed
 - ☐ a translation of the international application into , which is the language of a translation furnished for the purposes of:
 - ☐ international search (under Rules 12.3(a) and 23.1(b))
 - ☐ publication of the international application (under Rule 12.4(a))
 - ☐ international preliminary examination (under Rules 55.2(a) and/or 55.3(a))
2. With regard to the **elements*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report):*

Description, Pages

1-24 as originally filed

Claims, Numbers

1-19 as originally filed

- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/figs
- ☐ the sequence listing (*specify*):
- ☐ any table(s) related to sequence listing (*specify*):

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/figs
- ☐ the sequence listing (*specify*):
- ☐ any table(s) related to sequence listing (*specify*):

* If item 4 applies, some or all of these sheets may be marked "superseded."

**INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY**

International application No.
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Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	<u>1-19</u>
	No: Claims	
Inventive step (IS)	Yes: Claims	
	No: Claims	<u>1-19</u>
Industrial applicability (IA)	Yes: Claims	<u>1-19</u>
	No: Claims	

2. Citations and explanations (Rule 70.7):

see separate sheet

Re Item V

**Reasoned statement with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement**

1. References

Reference is made to the following document:

D1: WO 01/74990 A (STICHTING ENERGIE [NL]; REITH JOHANNES HENRICUS [NL]; HACK CORNELIS JO), 11 October 2001

2. Novelty (Article 33(2) PCT)

In view of the prior art cited, the subject-matter of claims 1-19 appears to be novel (Article 33(2) PCT).

3. Inventive Step (Article 33(3) PCT)

However, the present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claims 1-19 does not involve an inventive step in the sense of Article 33(3) PCT.

The document D1 is regarded as being the closest prior art to the subject-matter of the present application and discloses a process for culturing algae and other photosynthesising microorganisms in an open system, being inoculated with inoculum, which has been precultured in a closed photobioreactor (cf. abstract). The document describes, that high production and a high degree of purity of the algae species chosen can be achieved by said process (cf. page 3, paragraph 3).

Claims 1-19 do not appear to contain any features which, in view of said document, meet the requirements of the PCT in respect of novelty and/or inventive step, as the claims merely embrace obvious embodiments of the process disclosed in D1, which come within the scope of the customary practice followed by persons skilled in the art. Claims 1-19 can thus not be considered inventive (Article 33(3) PCT).